



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/515,980	07/06/2005	Hideaki Watanabe	101136-00120	2588
4372	7590	07/28/2006	EXAMINER	
ARENT FOX PLLC 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036			PILKINGTON, JAMES	
			ART UNIT	PAPER NUMBER
			3682	

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/515,980		WATANABE ET AL.	
	Examiner		Art Unit	
	James Pilkington		3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,6-8,10 and 13 is/are pending in the application.
- 4a) Of the above claim(s) 9,11,12,14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,6-8,10 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/29/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 9, 11, 12, 14 and 15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 28, 2006.

Priority

2. A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76), in particular JP 2002-159192 and JP 2003-108367.

Information Disclosure Statement

3. The information disclosure statement filed November 29, 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "an elastic solid interposed between an outer circumferential surface of said hub and *an inner circumferential surface of said hub* and an inner circumferential surface of said pulley

body" (clm1) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

5. Figure 11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

6. Claim 1 is objected to because of the following informalities:

- Clm 1, line 3 reads "diameter" should be - - radial - -

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not enable for an adhesive or the combination of adhesive and resin to be filled into the concave portion. The specification only enables for the use of a resin to fill the concave portion. Also, the specification doesn't enable any structure for preventing the resin from exiting the concave portion, is there a plate that is attached to prevent the resin from exiting? If not how does the resin stay inside?

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 1, 3, 6-8 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re clm 1, it is unclear as to what is meant by the phrase "substantially rectangular in section" (line 2-3) and "substantially U-shaped" (line 8). How

substantially like a rectangle/U-shaped does something have to be to meet the claim and does the applicant mean that the cross-section is rectangular/U-shaped? Also, is the same pulley groove disclosed in line 4 the same pulley groove that is in line 9 or does the device have two separate grooves?

Re clm 3, it is unclear as to what is meant by the phrase "protruded piece or a fitting hole fitted to the protruded piece is formed at one end of said ring piece" (pg 3-4 of amended clms). How does the plate have both a protruded piece and a fitting hole for the protruding piece one the same said of the ring piece? What are the concave portions formed on both sides of a base (pg 4 line 5? What is the base? How can concave portion be formed in an open end of a hole (pg 3 line 7)?

Re clm 6, the limitation "the other surface" in line 4. There is insufficient antecedent basis for this limitation in the claim. Also, what and where is this other surface located, is it on the same ring piece or on another? Also, what is "pressing them (dowels, line 6)"?

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 1, 3, 6-8, 10 and 13, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Asai et al, USP 5,591,093 in view of Strasburg et al, USP 2,198,135 and further in view of Tresselt, EP 0013129.

Asai discloses a torsional damper pulley comprising:

- A hub (10, see Figure 7) fixed at a revolving shaft (passes through the hub) of an internal combustion engine
- An annular pulley body (30) substantially rectangular in section which is coaxially placed outside the hub (10) in its radial direction, has a pulley groove (312) at an outer circumferential portion and has a predetermined inertia mass (weight of pulley body)
- An elastic solid (40) interposed between the outer circumferential surface of the hub (10) and the inner circumferential surface of the pulley body (30)
- The pulley body comprises an annular metallic frame (C2/L5-10, pulley is made of a thin metal plate) substantially U-shaped in section (see Figure 7 character 30), which has a concave portion (S2) open in its axial direction and has a pulley groove (312) at an outer circumferential portion

Asai does not disclose an annular inertia mass element fixed in said concave portion, wherein said inertia mass element is comprised of a laminate of annular plates which is formed by bonding arc-shaped ring pieces in a circumferential direction and a width direction.

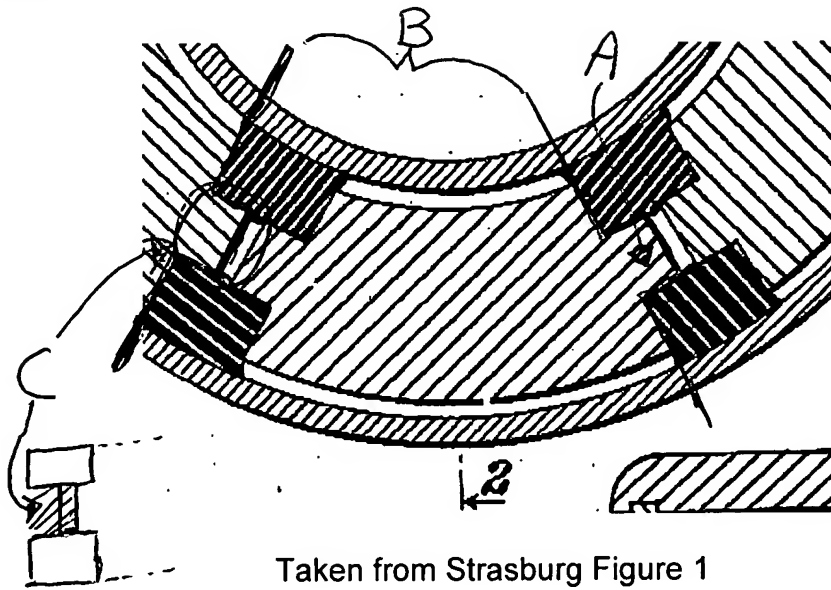
Strasburg and Tresselt teach an annular inertia mass element (10/11 of Strasburg, plates in Figure 3 of Tresselt) fixed in a concave portion (both shown in cavities), wherein said inertia mass element is comprised of a laminate of annular plates (both show plates) which is formed by bonding arc-shaped ring pieces (10/11 of

Art Unit: 3682

Strasburg) in a circumferential direction (Strasburg Figure 1) and a width direction (Tresselt Figure 3) for the purpose of providing a device that has simple parts and is more efficient in operation (C1/L2-3 Strasburg) and to insure adequate axial concentricity between the discs (Pg 2/L25-27).

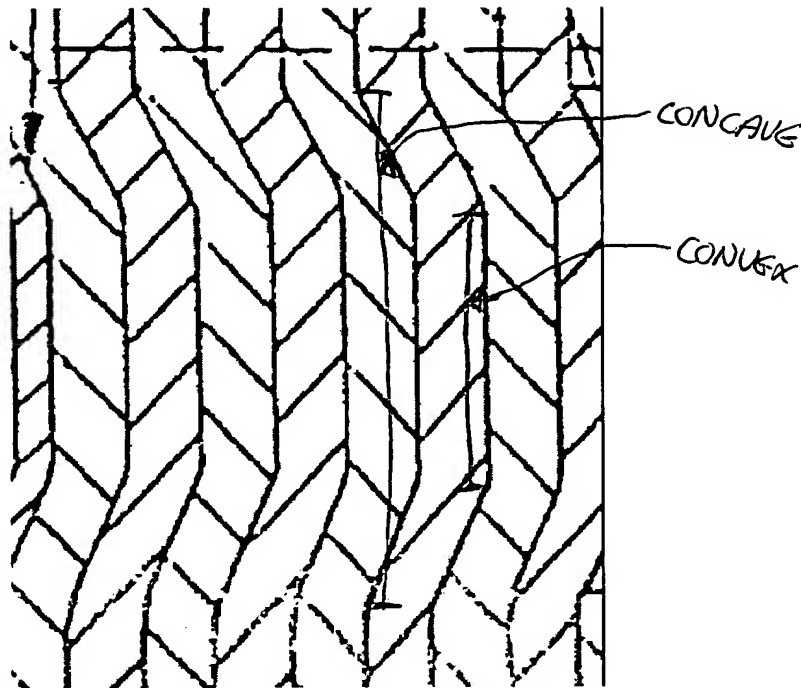
It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Asai and an annular inertia mass element fixed in a concave portion, wherein said inertia mass element is comprised of a laminate of annular plates which is formed by bonding arc-shaped ring pieces in a circumferential direction and a width direction, as taught by Strasburg and Tresselt, for the purpose of providing a device that has simple parts and is more efficient in operation and to insure adequate axial concentricity between the discs.

Re clm 3, Strasburg discloses a protruding piece (A, see Figure below) formed in one end of the ring piece (B, combination of 10 and 11) and a hole formed in the other end (C) of the ring piece (B), and said ring pieces are bonded in a circumferential direction by close-fitting the protruding piece (A) of one of the ring pieces (B) adjacent in a circumferential direction into the hole of the other one of the adjacent ring pieces.



Re clm 6, Tresselt discloses dowels (66) protruded from one surface of said ring piece to the other surface are formed, and said ring pieces are bonded in a width direction (see Figure 3) by overlaying said ring pieces adjacent in a width direction so that the dowels are displaced in a circumferential direction and pressing them.

Re clm 7, Tresselt discloses the convex portion of the dowel is narrower than a concave portion (see Figure 1 inserted below).



Taken from Figure 3 of Tresselt

Re clm 8, Asai in view of Strasburg and Tresselt discloses the annular plate is formed by bonding said ring pieces in a circumferential direction (Strasburg to make rings of Tresselt) and said laminate (stack of rings in Tresselt) is formed by bonding a plurality of annular plates in a width direction of said ring piece.

Re clm 10, Tresselt discloses the annular plate having an outer diameter to be in pressure-contact with an inner surface of an outer circumferential wall for defining the concave portion (s2) of said pulley body (30), and said inertia mass element is fixed by being press-fitted into said concave portion (Page 6 Line 1-12 of Tresselt "the discs are secured together continuously at a radius adjacent the inner border of the working chamber and a radius adjacent the outer border").

Re clm 13, Tresselt discloses that the working chamber can have a fluid (page 4 line 5).

Conclusion

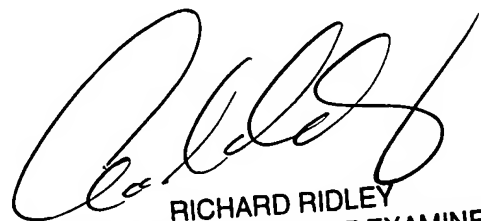
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In particular 5,979,390 and 5,749,269 as they show inertia rings that contact the inner surface of their respective cavities.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Pilkington whose telephone number is (571) 272-5052. The examiner can normally be reached on Monday-Friday 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JP
JP
7.25.2006


RICHARD RIDLEY
SUPERVISORY PATENT EXAMINER